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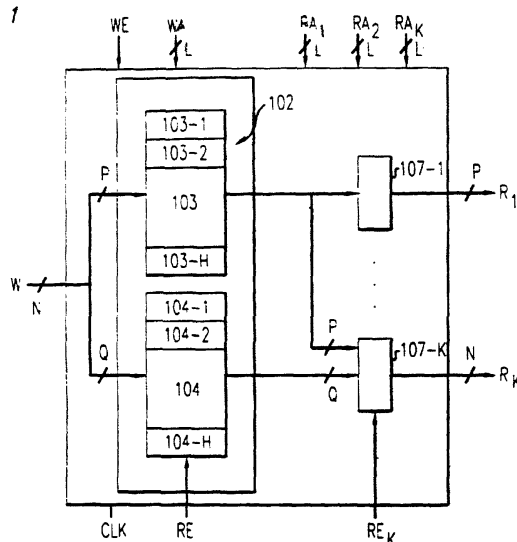
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(54) **Multiported register file for updating the coefficients of a burst mode FIR filter**

(57) Multiported register files used for storing coefficients in adaptive FIR are improved upon by implementing a split memory architecture (103,104) that has the ability to separately control the least significant bits and the most significant bits of coefficient values that are stored in the filter. When the filter is operated to use so-called "burst mode" updating, the updating circuitry of the filter can be disabled (by WE,RE) and only the most significant bits of the coefficients are read out from the multiported register file while the least significant bits

remain unchanged. This conserves power without sacrificing precision, since only certain ones of the bits of the coefficients are used in the multiplication of the sample. In addition, when only the most significant bits of the coefficients are being cycled through the register filter, any changing bits are prevented from being supplied to the updating circuit, so that the updating circuit performs no computation at all, rather than performing one that is discarded. Advantageously, using such improved multiported register files, adaptive FIR filters can be constructed which operate with lower power consumption.

FIG. 1





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# EUROPEAN SEARCH REPORT

Application Number  
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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H03H G11C
The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>14 August 2000</b>	Examiner <b>D/L PINTA BALLE., L</b>
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>&amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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EP 98 30 9952

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14-08-2000

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82